



Seattle-King County EMS

Emergency Medical Services Division
Public Health - Seattle/King County
999 3rd Avenue, Suite 700
Seattle, Washington 98104
(206) 296-4863

January 2006

CBT/OTEP 930 **Death and Dying**

print version of EMS Online Course
www.emsonline.net

Death and Dying

Introduction

The response of EMS providers to death in the field has been changing in recent years. Some of the reasons include: an aging of the population, more terminal illnesses and chronic health problems, shorter hospital stays and improved technology that allow the chronically ill to return home for care.

In addition, changes in society are occurring that affect our attitudes and practices surrounding death and dying. This includes a greater understanding of, and support for, those who decide to die at home, recognition of the needs of friends and family in an end-of-life event and higher expectations of field providers.

An expanded knowledge of death and dying will increase your level of comfort in dealing with these diverse situations.

NOTICE: This course discusses the withholding of resuscitation efforts from patients with terminal conditions who do not have written DNR orders. These guidelines have been implemented by King County, Washington and are not necessarily practiced elsewhere. If you are an EMT outside of King County, please consult with your agency's medical director regarding withholding resuscitation.

Before You Begin

This is a continuing education and recertification course for EMTs. It covers fundamental EMT-Basic concepts and terminology as well as advanced material. We highly recommend completing the practice exam before completing the exam.

Acknowledgements

In 1998, King County EMS offered guidelines that permitted both EMTs and paramedics to withhold resuscitation in certain situations for "compelling reasons." The guidelines were adopted by several agencies. A study of cases after implementation of the guidelines showed that the program was very successful.

The program has now spread widely thanks to the EMTs and paramedics who recognized the need in their communities for these bold new guidelines.

This course is based on the text of a course written by paramedics Sylvia Feder and Roger Matheny of King County Medic One. It does not cover all the topics contained in the original text.

Special thanks to the following people for their expertise and input in the development of this course:

Donald Reay, former Chief Medical Examiner for King County
 Jerry Webster, former Chief Medical Investigator for King County
 Mickey Eisenberg, MD, Medical Director King County EMS
 John Jerin, King County EMS

Course Objectives

CBT930 is an online EMS continuing education module for EMS providers. After completing this course you will be able to:

1. Identify the stages in the physiology of death.
2. Identify definitions of dependent lividity and rigor mortis.
3. Identify the definition of compelling reasons.
4. Identify instances of compelling reasons.
5. Identify whether or not to start resuscitation in a variety of situations.
6. Identify the reasons why a family would call 911 when a death is expected.

Death and Dying

Terms

Terms You Should Know

biological death — The point at which brain cells start to die generally after 4 to 6 minutes without oxygen.

clinical death — The moment at which heartbeat and breathing stop.

New Terms

advance directive — Instructions, usually in writing, that address an individual's medical treatment preferences.

DNR order — A do-not-resuscitate (DNR) order is a document that informs medical personnel not to attempt a resuscitation. Sometimes called a *do-not-attempt resuscitation* (DNAR) order.

dependent lividity — A reddish-blue discoloration of the skin resulting from the gravitational pooling of blood in the blood vessels evident in the lower lying parts of the body in the position of death. Also called *livor mortis*.

rigor mortis — A stiffening, usually occurring several hours after death.

palliative care — Providing measures that relieve or soothe the symptoms of a disease or disorder without effecting a cure, for example, providing oxygen therapy.

Physician's Orders for Life Sustaining Treatment (POLST) — A specific type of advance directive that communicates the treatment and resuscitation wishes of seriously ill patients.

Death and Dying

Resources

Web Sites

[The POLST Training Video, "POLST: Choices for End of Life"](#)

The online version is in four parts and formatted in WMV format.http://www.wsma.org/patients/polst_video.html

[Washington State Medical Association](#)

View an actual POLST form on this web site. Also includes links and resources on a variety of public health issues for physicians and patients.

<http://www.wsma.org/patients/polst.html>

[Do Not Resuscitate \(DNR\) order form](#)

A look at a basic DNR form.

<http://www.med.umich.edu/1libr/aha/umlegal03.htm>

[CancerPage.com](#)

Information about a variety of topics associated with dying and death for people with terminal cancer.

<http://www.cancerpage.com/centers/Transitions/index.asp>

Recommended Reading

Callahan, D. The Troubled Dream of Life. Simon and Schuster: New York, 1993.

Nuland, S. How We Die. Vintage Books, 1993.

Death and Dying

Cessation of Heartbeat

The line between life and death is often unclear. Understanding the physiology of death and gathering information from a variety of sources can assist you in deciding whether or not to start a resuscitation.

What ultimately causes death is the cessation of circulating blood, resulting from, or culminating in, cardiac arrest. In general, the following three steps occur in the dying process:

- cessation of heartbeat and breathing
- dependent lividity
- rigor mortis

The Moment of Death

If cardiac arrest occurs first, the process of dying is rapid. With other causes the progression from an awake state, to coma, to death, may occur over a period of hours, days or more. During this time, the person may become dehydrated; may have irregular, agonal or noisy respirations due to accumulation of secretions in the upper airway ("death rattle"); may have seizure activity; may lose control of bowel and bladder.

There is a cultural myth, born of inexperience and perpetuated by Hollywood, that people close their eyes and peacefully die. While this does happen sometimes, often it does not. The process of dying may be distressing to the patient, to the family and even to emergency service providers if they are present.

Death and Dying

Dependent Lividity

After a person has died and circulation stops, the blood begins to pool in the dependent areas (areas on the bottom part of the body in the position of death). This is called **dependent lividity**, and starts within a few minutes after death beginning in the extremities and progressing to the rest of the body.



Patient who died while lying on his stomach.
Notice lividity on his right torso.



Patient who died while lying on his stomach.

Lividity appears as a discoloration, resembling a blotchy black-and-blue or reddish mark. As time passes, the discoloration becomes more widespread and pronounced. It is caused when red blood cells in the blood vessels settle down to the lower areas of the body. This color change is less striking in skin with dark pigmentation. Lividity is also called *livor mortis*.

Death and Dying

Rigor Mortis

Over the next few hours after death, chemical changes occur in the cells of the body. Muscle cells contract and stay contracted, causing a rigidity known as **rigor mortis**. This stiffening of the body begins with small muscles including those of the fingers, neck and jaw and progresses to the extremities and pelvis.

As still more time passes (12 hours or longer), there is degradation of the protein in the muscles, causing the stiffening to relax and the body to become limp.

Environmental Factors

Environmental factors may have an important effect on the timeframe for the development of the signs of death. A low or high ambient temperature may cause cooling to occur more quickly or slowly. A person who is well-insulated by being under blankets may remain warm for a long period of time.

Temperature and physical activity preceding death may also affect the development of rigor; warm temperatures will slow the onset of rigor and strenuous physical activity prior to death will speed the onset of rigor, due to chemical changes associated with muscle activity.

Death and Dying

Assess the Scene

In some cases the decision whether or not to start resuscitation is easy, for example, a person who obviously has been dead for some time. When the situation is less clear, the first arriving unit should take the following actions as soon as possible:

- survey the scene for possible hazard or crime
- check for ABCs and injuries incompatible with life
- check for dependent lividity and rigor mortis if unwitnessed arrest or unknown down time



Begin resuscitation if you aren't sure whether or not to proceed.

Ask about the presence of an advance directive or resuscitation wishes if you suspect that a resuscitation may not be indicated. One way to gently ascertain this is by asking, "Your mother's heart has stopped. Do you know her wishes regarding resuscitation?"

Scene Survey

A thorough scene survey includes the following:

- ambient temperature
- location where patient was found
- position/anything unusual noted
- potential insulators that complicate the determination of "down time"
- presence of hospital equipment (hospital bed, IV set-ups, etc.)

Death and Dying**History and Physical Exam**

It is important to gather adequate information about the patient from witnesses or family members. A patient history should include the following information:

- witnessed or unwitnessed arrest
- time last seen
- CPR attempts by witnesses and quality of CPR
- preceding events (complaints, signs and symptoms, activity)
- medical history (cardiac, diabetes, respiratory, terminal illness, etc.)
- baseline level of functioning
- physician and hospital affiliation
- DNR orders, POLST or patient/family wishes

When conducting the physical exam, note the following:

- general condition of body (emaciated, well-nourished, jaundiced, etc.)
- body temperature
- signs of trauma (bruising, burns, etc.)
- signs of death (dependent lividity, rigor mortis, and so forth)

Death and Dying

Withholding Resuscitation

A systematic approach to evaluating the scene and the patient will help you make a good decision about whether or not to withhold resuscitation. You may withhold or stop resuscitation if any of the following are present:

- injuries incompatible with life
- advance directive stating resuscitation should be withheld
- dependent lividity, rigor mortis
- compelling reasons to withhold resuscitation

If a resuscitation effort has been initiated and you are provided with an appropriate advance directive or compelling reasons that such an effort should be withheld, stop the resuscitation.

If you decide to withhold resuscitation, document your reasons including physical exam, patient history, paperwork or statements made by family or caregivers.

Withholding Resuscitation

You should not start CPR when a patient's injuries are incompatible with life such as decapitation.

Another situation in which you may withhold CPR is when a patient or family member presents an advance directive. The directive must state that CPR or resuscitation should be withheld, for example, a POLST order that contains specific instructions to withhold CPR.

Obvious signs of lividity, which is pooling of blood in lower body regions, or rigor mortis, a stiffening of the body's muscles after death, are other indications to not start CPR.

Finally, *compelling reasons*, such as the presence of a living will and family requests to not do CPR, may cause you to consider withholding resuscitation.

Death and Dying

Compelling Reasons

Patients who are mentally competent have the right to refuse medical care, including resuscitation. Patients who are dying have the same rights. You have the responsibility to determine a patient's resuscitation wishes and honor them if possible.

Compelling reasons permit EMS personnel to withhold resuscitation from a patient in cardiac arrest when two criteria are BOTH present. These are:

- end stage of a terminal condition
- written or verbal request from family that resuscitation be withheld

If both criteria are not met, you should initiate a resuscitation effort. If both criteria are met, you should withhold a resuscitation effort. If resuscitation was already started, it should be stopped.

You must document compelling reasons when they are used as a basis for withholding resuscitation.

When There is No Written Directive

Compelling reasons to withhold resuscitation can be invoked when written information is not available, yet the situation suggests that the resuscitation effort will be futile, inappropriate and inhumane.

Clearly it is much easier for EMS personnel when families are prepared with a written *advance directive*, but in many cases, the written paperwork is not present -- it is at the lawyer's office, still unsigned, or they didn't know that they needed one. The compelling reasons guidelines allow EMS personnel to honor patient wishes even if there is no written directive.

Therefore, it is important to ask about resuscitation wishes if you suspect that resuscitation may not be indicated. One way to gently ascertain this is by saying, "Your mother's heart has stopped. Do you know what her wishes were regarding resuscitation?"

Examples of Compelling Reasons

To invoke compelling reasons, both criteria must be present: The patient must be in the end stage of a terminal condition, and there must be a written or verbal request from family or patient to withhold resuscitation.

Here are two situations in which one criterion is met but not the other.

1. A 70-year-old man mowing his lawn collapses in cardiac arrest. His 24-year-old wife asks you not to resuscitate, stating "He didn't want anything done!"

Criterion 1: not met - not a terminal condition

Criterion 2: met - verbal request from family that resuscitation be withheld

2. A 90-year-old woman in a vegetative state is in a nursing home with terminal lung cancer. Staff states she is a "full code."

Criterion 1: met - terminal condition

Criterion 2: not met -no request from family that resuscitation be withheld

Documenting Compelling Reasons

Example of a written narrative that demonstrates proper documentation of compelling reasons:

Subjective: 62 y.o. female unresponsive. Pt's husband states that pt has been c/o weakness and SOB which have been increasing over last week. Just before they called 911, pt. began coughing up bright red blood...then became unresponsive. PMH: End stage lung cancer

Objective: Pt lying on bedroom floor in a small pool of blood, emaciated, unresponsive, pulseless and apneic, warm with no rigor or lividity.

Assessment: Expected death secondary to terminal cancer

Plan: Exam, detailed hx from family. Husband states pt. has been in declining health due to terminal lung cancer and is expected to die. They declined CPR on our arrival and advised us pt. did not want any resuscitation efforts. They called 911 to confirm death. Resus. w/held due to this condition and request by family. Assisted family by cleaning patient and putting back in bed. PD arrived and will help family with funeral arrangements.

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Why Families Call 911

It is not uncommon for 911 to be summoned for a person with a DNR order, or a person who is clearly dead and on whom resuscitation will not be attempted. Sometimes families call because they don't know what else to do and are overwhelmed by the realities of death, which may include significant pain, shortness of breath, bleeding or seizures.

In other cases, they may believe that 911 notification is required by law, or they may simply want confirmation of death. If the scene suggests that this is an expected natural death, it is important to talk to family members and caregivers to determine resuscitation wishes.

Reasons why people call 911 for an expected death include:

- confusion
- uncertainty
- guilt
- inappropriate information from other agencies
- need for confirmation of death



Don't assume that a call to 911 is done with an expectation of resuscitative efforts.

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Withholding CPR

Like many EMS providers, you may have ethical or legal concerns about withholding resuscitation or aggressive treatment from a patient who does not have advance directive paperwork.

It is important to know that in withholding resuscitation for compelling reasons, you are honoring a patient's wishes.

Washington State Legal Protection

By following guidelines in this course, you are protected from legal liability by RCW 18.71.210 when you act in good faith and in accordance with your training.

Family Member Revoking a DNR Order

In addition to legal and ethical concerns, some EMS providers wonder about disagreements among family members at the scene of an expected natural death. While uncommon, this does occur, and there is no single "right" way to deal with every situation.

A signed DNR order reflecting a patient's wishes, supported by a family member who has power of attorney, is strong support for withholding resuscitation wishes, even if other family members disagree. A verbal statement from a family member who has power of attorney or a close relative (for example, husband or wife) should also be given priority over someone not as close.

In these situations, calmly telling family members that you want to honor the wishes of their loved one is often sufficient to defuse the situation. Clearly there will be times in which the situation is volatile, and beginning resuscitation is the safest strategy. Be sure to advise incoming responders so they will be prepared to deal with the situation.

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Advance Directives

Terminally ill patients and those in a permanent vegetative state with no hope of improvement have the right, according to some state laws, to experience death with dignity supported by humane comfort measures. In these situations, patients and family can request that the person not be subjected to an aggressive resuscitation.

In the field, you may encounter three types of advance directives:

- DNR order
- POLST
- living will

DNR Order

- originates and is signed by physician AND patient or surrogate
- generally for people near the end of their natural lives
- deals primarily with CPR/resuscitation
- EMS personnel may honor DNR orders

POLST (Physician's Orders for Life-Sustaining Treatment)

- originates and is signed by physician AND patient or surrogate
- generally for people near the end of their natural lives
- deals with both CPR/resuscitation and other types of treatments such as antibiotics, nutrition and hydration
- EMS personnel may honor POLST directives

Living Will

- easily obtained by anyone; no physician signature required
- generally for adults at any point in their lives
- does not deal with emergent treatment such as resuscitation, but rather, treatment of a future condition
- EMS personnel may take a living will into account as an expression of a patient's wishes to invoke compelling reasons

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POLST

A **Physician's Orders for Life-Sustaining Treatment** (POLST) is a specific type of advance directive that communicates the treatment and resuscitation wishes of seriously ill patients. POLST is signed by the patient's physician and is portable from one facility to another; it can also be honored in the prehospital setting.

POLST not only conveys information about resuscitation in the case of cardiac arrest, but also provides guidance on more advance treatment such as intubation, artificial feeding, antibiotics and hydration.

The mere presence of a POLST does not mean you shouldn't do CPR. With POLST, the old days of "Stop CPR! He's got a DNR order" are over. You must check the document to determine the patient's wishes.

POLST in Washington State

POLST replaces the Washington State EMS No CPR directive.

sample: <http://www.wsma.org/patients/polst.html> (Washington St. Medical Assoc.)

DNR Orders

A do-not-resuscitate (DNR) order is a document that informs medical personnel not to perform CPR. A DNR order originates and is signed by a physician AND the patient or surrogate. It is generally for people near the end of their natural lives and primarily deals with CPR/resuscitation.

The order does not mean that the patient receives no care, only that CPR should not be performed. Other treatment, such as oxygen therapy, clearing the airway, controlling bleeding, providing emotional support, contacting hospice (if involve) and requesting ALS for pain control may still be provided.

sample: <http://www.med.umich.edu/1libr/aha/umlegal03.htm> (U of Michigan)

Living Wills

A living will is a written statement that expresses a person's wishes for medical treatment if the person were incapacitated. A living will is not a DNR order and it is not intended for emergency situations; however, you can take the presence of a living will and the feelings of responsible family members into account.

You may determine that a living will constitutes a compelling reason not to begin resuscitation. Include documentation of such evidence in the narrative section of the incident report.

Death and Dying

Summary

The following key points were covered in this course:

You can determine whether or not to begin resuscitation by assessing **pulse and breathing** and checking for **lividity** and **rigor mortis**.

Do not initiate resuscitation if:

- injuries are **incompatible with life**
- a valid **advance directive** is present
- **lividity/rigor mortis** are present
- **compelling reasons** to withhold resuscitation

You may withhold resuscitation if there are compelling reasons; however, two criterion must be met:

- **end stage of a terminal condition**
- **written or verbal request** from family

You must **document compelling reasons** when they are used as the basis for withholding resuscitation.

When there is doubt—**initiate resuscitation**.

Don't make assumptions about the family's desire for resuscitative efforts without asking.